

LINEAR ELECTRIC MOTOR CONTROLLER AND SYSTEM FOR PROVIDING LINEAR CONTROL

ABSTRACT

5 The invention relates to a method of, and system for, linear speed control for
an electric motor, in which a digital to analog converter means is used for converting an 8-
bit digital signal to an analog voltage for setting voltage across a motor, a digital state
machine means is used for converting the duty cycle of an input signal for output to the
digital to analog converter means, and a closed loop feedback loop means is used for
10 monitoring and setting the voltage across the motor. An over-current sense circuit can be
used for monitoring the current across the electric motor. An over/under voltage sense
circuit can be used for monitoring voltage of the electric motor. The resulting 8-bit digital
control signal is converted to an analog voltage for the electric motor. Such methods and
systems find particular use in automotive applications.